

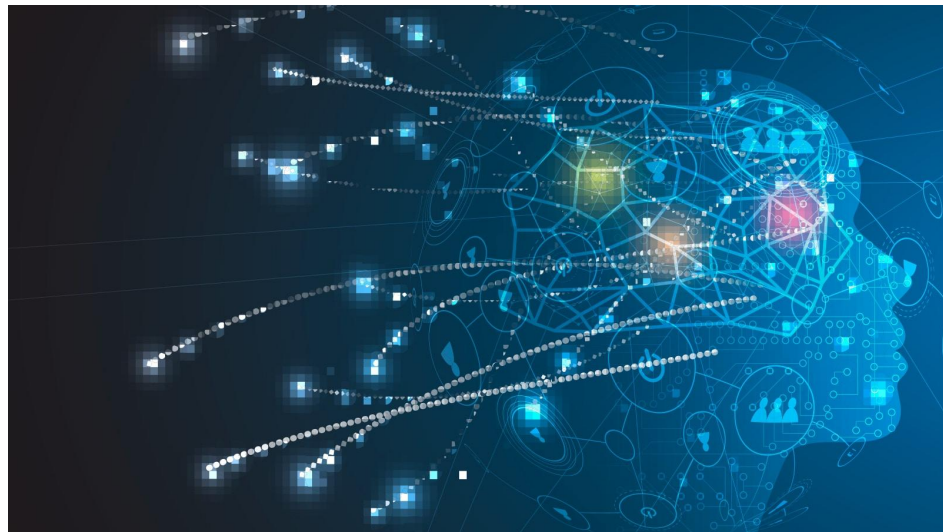


# Deep learning techniques for energy clustering in the CMS electromagnetic calorimeter



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on behalf of the CMS collaboration

- New algorithm developed for CMS ECAL reconstruction.
- Using **cutting-edge techniques** in Machine Learning:
  - Graph Neural Networks
  - Self-attention modules
  - Transfer Learning
- **Significant improvement** in energy resolution achieved compared to Run2 algorithms.
- **Beyond energy reconstruction**: more reconstruction possibilities using the same network...



<https://www.biocatch.com/blog/behavioral-biometrics-primer-dynamic-fraud-detection>